

Sub. E1 > ^(P¹) the substrate treatment position while seated upon the support structure within the chamber, the heat exchange member spaced from the substrate by between about 0.2 mm and 3.0 mm to enable conductive heat transport across a gap between the heat exchange member and the substrate in the heat transport position, the substrate being seated upon the support in each of the substrate treatment position and the heat transport position.

Sub. E1 > ^(P²) 57. (Amended) The reactor of Claim 56, wherein the heat exchange member comprises a cooling plate and the plate is stored within an actively cooled pocket in the substrate treatment position.

58. (Amended) The reactor of Claim 57, wherein the plate extends over the substrate upon the support structure in the heat transport position.

Sub. E1 > ^(P³) 65. (Twice Amended) A cooling mechanism in a substrate processing system, the mechanism comprising:

a support structure supporting a substrate in a process chamber during high temperature processing at a substrate processing position; and

an actively cooled thermal exchange member,

wherein the support structure and the thermal exchange member are relatively movable between the substrate processing position and a cooling position, in which the substrate is supported upon the support structure between about 0.2 mm and 3 mm from the thermal exchange member, and a substrate load position, in which a wafer handler can place the substrate upon the support structure, wherein the substrate processing position, the cooling position and the load position are within the chamber.

Sub. E1 > ^(P⁴) 72. (Twice Amended) A processing reactor for high temperature treatment of substrates, the reactor comprising:

a plurality of walls defining a chamber;

a movable substrate support structure;

a heat source for heating a substrate upon the support structure within the chamber;

a thermal exchange member; and

a drive mechanism capable of moving the support structure between a substrate treatment position and a heat exchange position,

wherein the support structure supports the substrate during substrate treatment within the chamber at the substrate treatment position, and wherein the support structure